

**IN THE SPECIFICATION:**

Please amend the specification as follows:

Paragraph no. [0035] beginning on page 6, at prenumbered line 17, has been amended as follows:

[0035] Please refer to figures 3A and 3B, which are 3-D structure views of the two preferred embodiments of rotor with built-in permanent magnet of the present invention. Wherein, the rotor 2 with built-in permanent magnet comprises of: a rotor core 20 and a plurality of permanent magnets 29. The rotor core 20 is a cylindrical structure. As showing in figure 3A, the cylindrical structure could be as an integrally formed solid silicon steel, of course it could be made by other good permeability materials. As showing in figure 3B, the preferred cylindrical structure could be formed via accumulation of a plurality of silicon steel sheet pieces 28. The silicon steel sheet piece 28 is made of silicon steel via stamping. Each silicon steel sheet piece 28 ~~is set a plurality of convex points 281 on a side~~ has a plurality of dents 281, each dent has a convex point on a first surface of the silicon steel sheet piece 28, and ~~the other side surface is set a plurality of concaves relative to a plurality of convex points 281, thus a concave point on a second surface.~~ the The accumulation of a plurality of silicon steel sheet pieces 28 ~~is formed, by using forms~~ the rotor core 20. The steel sheet pieces 28 can be made by a stamping process to make and make and match the convex points 28 and concaves plurality of dents 281 so as to fix and form the cylindrical structure. A center of rotor core 20 is further designed a central axial hole 26, and a plurality of arch troughs 27 are distributed surrounding the central axial hole 26. Arc troughs 27 can decrease weight and material cost.

Paragraph no. [0038] beginning on page 7, at prenumbered line 25, has been amended as follows:

[0038] The rotor 2 is a cylindrical structure, which is set in a cylindrical capacity, and there is ~~an air gap~~ a space 13 between ~~a circumference surface of the~~

~~cylindrical capacity and the cylindrical structure~~ the annular stator 1 and the rotor 2. When annular stator 1 is electrified, slot 12 produces magnetic forces in order for rotating rotor 2 in cylindrical capacity. In the preferred embodiment, rotor 2 ~~further~~ includes ~~a~~ the rotor core 20 and a plurality of permanent magnets 29. Rotor core 20 is a cylindrical structure, and ~~a~~ the plurality of opening 25 are set surrounding a cylindrical structure, and ~~a~~ the plurality of openings 25 are set surrounding a outer-skirt of the rotor core 20. The shape of permanent magnet 29 fits with opening 25, and the arrangement of the way of interlaced magnetic poles for permanent magnets 29 are contained in openings 25.

Paragraph no. [0039] beginning on page 8, at prenumbered line 1, has been amended as follows:

[0039] In the preferred embodiment, opening 25 is designed similar to a rectangular or trapezoid to fit with permanent magnet 29 of the same rectangular or trapezoid for easily inserting permanent magnet 29 into opening 25. The opening 25 is with two parallel surfaces, a top surface 251 and a bottom surface 252. The top surface 251 is ~~adjacent to contour of rotor core 20 and extends along with circumference contour of the rotor core 20 so as to form~~ formed on a side of the opening closest to an outer circumference of the rotor core and extends a length of the rotor core. The opening has a side surface 253 which is substantially parallel to the outer ~~contour~~ circumference of the rotor core 20. In this preferred embodiment, the side surface 253 is an arc surface, which curvature is equal to ~~the~~ a circumference contour of the rotor core 20. Of course, a polygon arc surface approaching to the curvature of the circumference contour could reach same function. A suitable ~~air-gap~~ space 255 is between side surface 253 and ~~contour of the outer circumference of the~~ rotor core 20. The ~~air-gap~~ space 255 is small and plays the role of flux-barrier, but easily made, and it performs well when the distance smaller than 0.7 mm. Two adjacent side surfaces 253 are ~~with~~ spaced by a channel 254 with suitable width. The width of the channel 254 is small and ~~the function of flux-barrier, but easily made~~ functions as a flux-barrier. In the preferred

embodiment, channel 254 performs well when the ~~distance~~ width is smaller than 0.7 mm.

Paragraph no. [0040] beginning on page 8, at prenumbered line 19, has been amended as follows:

[0040] In the aforesaid preferred embodiment, two ends of side surface 253 separately connect to top surface 251 and bottom surface 252. For preventing permanent magnet 29 damaged in manufacturing, the adjacent parts of side surface 253, ~~top surface 251 and bottom surface 252 of opening 25~~ are trimmed to be arch-shaped; of course, ~~the relative location on~~ across section of permanent magnet 29 ~~are arc shaped as well matches a cross section of the opening so that the~~ permanent magnets can be inserted into the opening.

Paragraph no. [0042] beginning on page 9, at prenumbered line 5, has been amended as follows:

[0042] Please refer to figure 5A to 5C, which are another preferred embodiment of motor of rotor with built-in permanent magnet of the present invention. Wherein, the thickness of the permanent magnet 29 is changed, and an adjacent surface 256 is in between the side surface 253 and the bottom surface 252, thus side surface 253 and the adjacent surface 256 are taper arc surfaces, and a channel 254 between two adjacent permanent magnets 29 is strip shape. For preventing permanent magnet 29 damaged in manufacturing, the ~~adjacent parts of side surface 253, top surface 251 and bottom surface 252~~ side surfaces 253 of opening 25 are arc-shaped; of course, ~~the relative location~~ locations on permanent magnet 29 are arch-shaped as well. Wherein, the dimensions of outer diameters of annular stator 1 and the rotor 2 of the preferred embodiments is the same conditions as the preferred embodiment's for figure 4A to 4D, and the maximum output torque of the preferred embodiment is promoted to 31 NT-m, thus the promotion rate is about 5%.